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26418	7590	03/06/2008	EXAMINER	
REED SMITH, LLP			LE, HUYEN D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/821,905

Applicant(s)

STAAT, RAIMUND

Examiner

HUYEN D. LE

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the damping element being constructed in the diaphragm (claim 4) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Figure 7 of the present invention does not show the damping element being constructed in the diaphragm as claimed in claim 4. It shows a disk, which lies in front of the diaphragm ring D, forms an acoustic damping element DE (also see [0053] in the specification).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumhauer, Jr. et al. (U.S. patent 5,226,076).

Regarding claim 1, Baumhauer, Jr. et al. teaches a microphone (figures 2, 3) that comprises a diaphragm system with a first diaphragm (203, 303) having a first surface and a second surface, a first sound inlet (202, 302) in at least one first opening arranged substantially parallel to and facing the first surface of the first diaphragm (203, 303), and a second sound inlet (201, 301) in at least one second opening.

It appears that the sound entering via the second sound inlet (201, 301) strikes the second surface of the first diaphragm (203, 303) very largely unaffected as claimed (figures 2, 3). Baumhauer, Jr. further shows an acoustic damping (302, figure 3) that is arranged at the first sound inlet (302) for damping the sound entering via the first sound inlet before the sound strikes the first surface of the first diaphragm (also see col. 4, lines 55-59).

As shown in the figure 3, the first sound inlet (302) lies in front of the first diaphragm and the second sound inlet lies behind the first diaphragm with respect to the main sound direction.

Regarding claim 2, since the Applicant does not specifically claim the laterally opening relative to what element, as broadly claimed, Baumhauer shows a housing into which an opening (301) is laterally provided.

Regarding claim 3, as shown in figure 3, the first sound inlet (302) is arranged in a housing and lies with respect to the main sound direction in front of the first diaphragm.

Regarding claim 4, Baumhauer, Jr. shows a damping element is constructed in the first opening (302).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumhauer, Jr, et al. (U.S. patent 5,226,076).

Regarding claims 5-6, Baumhauer, Jr. teaches the first sound inlet (302) that is constructed with an acoustic damping element as claimed.

Baumhauer does not specifically teach that the first sound inlet being constructed with an acoustic element and the volume between the damping element and the diaphragm forms an acoustic lowpass as claimed. However, Baumhauer does not restrict the range for the frequency response of the microphone (col. 4, lines 55-59).

Art Unit: 2615

Therefore, it would have been obvious to one skilled in the art to construct the damping element in the first sound inlet and the volume between the damping element and the diaphragm for forming any frequency range such as an acoustic lowpass depending the desired frequency characteristics and better adjusting the directional characteristics in the system.

Regarding claim 7, Baumhauer, Jr. et al. does not specifically teach the microphone which is used in a microphone headset. However, it is known in the art to provide a microphone in a headset.

Therefore, it would have been obvious to one skilled in the art to provide the microphone of Baumhauer, Jr. in a microphone headset for greater application.

6. Claims 1-4 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (U.S. patent 5,282,245) in view of Baumhauer et al. (U.S. patent 5,226,076).

Regarding claims 1, 3 and 4, Anderson teaches a microphone (figures 6, 7) that comprises a diaphragm system (106) with a first diaphragm, a first sound inlet (130, 150, 152) in at least one first opening arranged substantially parallel to and facing the diaphragm system (106), and a second sound inlet (112) in at least one second opening.

It appears that the sound entering via the second sound inlet (112) strikes the second surface of the diaphragm system (106) very largely unaffected as claimed (see figures 6, 7). Anderson further shows an acoustic damping (140, 142) that is arranged at the first sound inlet (130) for damping the sound entering via the first sound inlet before the sound strikes the first surface of the diaphragm system.

Art Unit: 2615

As shown in the figures 6 and 7, the first sound inlet (130) lies in front of the first diaphragm and the second sound inlet (112) lies behind the first diaphragm with respect to the main sound direction.

Anderson does not specifically show the first sound inlet (130) in the first opening arranged substantially parallel to and facing the first surface of the diaphragm in the diaphragm system (106). However, providing a surface of a diaphragm parallel and facing to a sound inlet in the microphone is known in the art.

Baumhauer teaches a microphone (figures 2, 3, prior art) that has a sound inlet in an opening arranged substantially parallel to and facing a surface of a diaphragm (203, 303).

Therefore, it would have been obvious to one skilled in the art to provide the microphone having the diaphragm, as constructed by the prior art of Baumhauer, in the diaphragm system of Anderson, for providing the improved frequency response.

Regarding claim 2, since the Applicant does not specifically claim the laterally opening relative to what element, as broadly claimed, Anderson shows a housing into which an opening (112) is laterally provided.

Regarding claim 7, Anderson in view of Baumhauer does not specifically teach the microphone which is used in a microphone headset. However, it is known in the art to provide a microphone in a headset.

Therefore, it would have been obvious to one skilled in the art to provide the microphone of Anderson in view of Baumhauer, Jr. in a microphone headset for greater application.

Regarding claim 8, Anderson shows the damping element (142) that includes a passive diaphragm as claimed.

Art Unit: 2615

Response to Arguments

7. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Toki (U.S. patent 6,091,830) teaches a damping cloth or an acoustic resistance cloth (4) in the front portion of a microphone.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HL
March 2, 2008



HUYEN LE
PRIMARY EXAMINER